

March 7, 2018

LICENSEE: UNIVERSITY OF MISSOURI-COLUMBIA RESEARCH REACTOR

SUBJECT: SUMMARY OF FEBRUARY 26, 2018, PUBLIC MEETING TO DISCUSS THE PROPOSED MOLYBDENUM-99 PRODUCTION FACILITY AT THE UNIVERSITY OF MISSOURI RESEARCH REACTOR USING THE GENERAL ATOMICS SELECTIVE GAS EXTRACTION PROCESS (CAC NO. A11010/05000186/L-2017-LLA-0227)

On February 26, 2018, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the University of Missouri-Columbia Research Reactor (MURR), and its partners, General Atomics, Inc., and Nordion, Inc. (Canada), at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was to discuss the technical and licensing considerations associated with the proposed molybdenum-99 (Mo-99) production using the General Atomics (GA) Selective Gas Extraction process at MURR facility. A portion of this meeting was closed to the public to discuss proprietary information related to the specifics of design and operation of the proposed project. The meeting notice and agenda, dated February 7, 2018, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML18038B494. A copy of the presentation provided during the public portion of the meeting is available under ADAMS Accession No. ML18058A904. A list of meeting attendees is provided as an enclosure to this summary.

MURR provided an update to information provided at the previous public meeting conducted on February 13, 2017. MURR discussed the Part 1 license amendment request (LAR), submitted by letter dated May 3, 2017 (ADAMS Accession No. ML17132A252), and confirmed its request for an NRC staff review of the Part 1 LAR that would support in the issuance of a license amendment to MURR's Renewed Facility Operating License No. R-103. The Part 1 LAR requests modification of the reactor reflector and the installation of supporting systems (e.g., target cooling systems, and additional reactor trips), to allow the irradiation of two low enriched uranium targets to be located in the graphite reflector region of the MURR. However, MURR indicated that it would not conduct target irradiations in the MURR until NRC staff completes its review of the yet-to-be-submitted of the Part 2 LAR. The Part 2 LAR is expected to request approval for target processing and Mo-99 extraction using the GA Selective Gas Extraction hot cell technology.

Additionally, MURR indicated that its proposed licensing approach, previously described in letter dated January 17, 2017 (ADAMS Accession No. ML17019A006), and supplemented in its submittal of the Part 1 LAR on May 3, 2017 (ADAMS Accession No. ML17132A252), would be updated with additional supporting information and submitted to the NRC staff for formal review and response. Specifically, the NRC staff expects MURR to request that the NRC staff provide positions on 1) whether or not the proposed GA hot cells would require a construction permit and 2) whether the GA hot cells would be licensed as a commercial production facility, as

defined in Title 10 of the *Code of Federal Regulations* Part 50, under Section 103 of the Atomic Energy Act of 1954, as amended.

During the closed portion of the meeting, MURR, and its partners, provided proprietary-level detail related to the specific design and operation of the proposed Mo-99 production process, including the isotopic separation processes and necessary equipment contained within the proposed hot cells. MURR indicated that another public meeting would be requested to discuss some of the remaining aspects of the design of the proposed Mo-99 production facility that were not finalized at the time of this public meeting.

Please direct any inquiries to me at 301-415-0893, or Geoffrey.Wertz@nrc.gov.

Sincerely,

/RA/

Geoffrey Wertz, Project Manager
Research and Test Reactors Licensing Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

Docket No. 50-186

Enclosure:
As stated

cc: w/enclosure

cc:

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DATE: MARCH 7, 2018

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ADAMS Accession No.: ML18059A490;

*concurred via email

NRC-001

OFFICE	NRR/DLP/PRLB/PM*	NRR/DLP/PRLB/LA*	NRR/DLP/PRLB/ABC	NRR/DLP/PRLB/PM
NAME	GWertz	NParker	SLynch	GWertz (SLynch <i>for</i>)
DATE	3/ /18	3/1/18	3/7/18	3/7/18

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LIST OF ATTENDEES

FEBRUARY 26, 2018, MEETING WITH UNIVERSITY OF MISSOURI-COLUMBIA

RESEARCH REACTOR

9:00 A.M. – 4:00 P.M.

<u>Name</u>	<u>Organization</u>
Bruce Meffert	University of Missouri-Columbia Research Reactor
Les Foyto	University of Missouri-Columbia Research Reactor
David Robertson	University of Missouri-Columbia Research Reactor
Michael Flagg	University of Missouri-Columbia Research Reactor
Tom Poindexter	Morgan Lewis
Ryan Lighty	Morgan Lewis
Mike Krzaniak	Nordian, Inc.
Robert Buckingham	General Atomics, Inc.
Thad Heltemes	Argonne National Laboratory
Mary Jane Ross-Lee	U.S. Nuclear Regulatory Commission
James Hammelman	U.S. Nuclear Regulatory Commission
Marilyn Diaz	U.S. Nuclear Regulatory Commission
Richard Jervey	U.S. Nuclear Regulatory Commission
David Tiktinsky	U.S. Nuclear Regulatory Commission
Duane Hardesty	U.S. Nuclear Regulatory Commission
Charles Teal	U.S. Nuclear Regulatory Commission
Linh Tran	U.S. Nuclear Regulatory Commission
April Smith	U.S. Nuclear Regulatory Commission
Robert K. Johnson	U.S. Nuclear Regulatory Commission
Cindy Montgomery	U.S. Nuclear Regulatory Commission
Lisa Clark	U.S. Nuclear Regulatory Commission
Ashley Ferguson	U.S. Nuclear Regulatory Commission
John Nguyen	U.S. Nuclear Regulatory Commission
Jeremy Wachutka	U.S. Nuclear Regulatory Commission
Michael Balazik	U.S. Nuclear Regulatory Commission
Bill Rautzen	U.S. Nuclear Regulatory Commission
Kevin Folk	U.S. Nuclear Regulatory Commission
Edward Helvenston	U.S. Nuclear Regulatory Commission
Geoffrey Wertz	U.S. Nuclear Regulatory Commission
Garrett Henderson	U.S. Nuclear Regulatory Commission
Mitzi Young	U.S. Nuclear Regulatory Commission
Dan Barss	U.S. Nuclear Regulatory Commission
Donna-Beth Howe	U.S. Nuclear Regulatory Commission
Steven Lynch	U.S. Nuclear Regulatory Commission
Ralph Butler*	Individual
Michael Keegan*	Nuclear Free Great Lakes
Cassandra Frazier*	U.S. Nuclear Regulatory Commission
Charity Pantalo*	U.S. Nuclear Regulatory Commission
Yawar Faraz*	U.S. Nuclear Regulatory Commission
Jeremy Munson*	U.S. Nuclear Regulatory Commission
Paul Carman*	U.S. Nuclear Regulatory Commission
William Shuster*	U.S. Nuclear Regulatory Commission

*Participation by telephone

Enclosure